FILE 'REGISTRY' ENTERED AT 02:21:04 ON 04 JUL 2009
REGISTRY includes numerically searchable data for experimental and
predicted properties as well as tags indicating availability of
experimental property data in the original document. For information
on property searching in REGISTRY, refer to:

http://www.cas.org/support/stngen/stndoc/properties.html

=> cytokine/cn
L1 0 CYTOKINE/CN

=> e cytokine/cn
E1 1 CYTOKIN/CN
E2 1 CYTOKINASE/CN
E3 0 --> CYTOKINE/CN
E4 1 CYTOKINE (CARP CLONE M17 PRECURSOR)/CN
E5 1 CYTOKINE (CHICKEN CLONE 391)/CN
E6 1 CYTOKINE (CHICKEN CLONE 4 C-TERMINAL FRAGMENT)/CN
E7 1 CYTOKINE (CYPRINUS CARPIO CLONE M17 PRECURSOR)/CN
E8 1 CYTOKINE (FASTING-INDUCED ADIPOSE FACTOR) (HUMAN)/CN
E9 2 CYTOKINE (HUMAN AMP18 (ANTHUM MUCOSAL PROTEIN 18) PRECURSOR)
/CN
E10 1 CYTOKINE (HUMAN ANTIGEN CD30 LIGAND)/CN
E11 1 CYTOKINE (HUMAN CLONE 1092454 GENE SCYA21 REFERENCE ISOFORM)
/CN
E12 1 CYTOKINE (HUMAN CLONE ATCC-97486 PRECURSOR)/CN

=> e cytokine/
E13 1 CYTOKIN/BI
E14 1 CYTOKINASE/BI
E15 12890 --> CYTOKINE/BI
E16 46 CYTOKINES/BI
E17 2 CYTOKINESIN/BI
E18 104 CYTOKINESIS/BI
E19 310 CYTOKININ/BI
E20 2 CYTOKININS/BI
E21 391 CYTOL/BI
E22 12 CYTOLASE/BI
E23 241 CYTOLETH/BI
E24 241 CYTOLETHAL/BI

=> s e 15
795342 E
650643 15
L2 555 E 15
(E(W)15)

=> e integrin/
E25 2 INTEGRIGYMNATUS/BI
E26 1 INTEGRILIN/BI
E27 2830 --> INTEGRIN/BI
E28 8 INTEGRINS/BI
E29 27 INTEGRIPET/BI
E30 27 INTEGRIPETAL/BI
E31 27 INTEGRIPETALA/BI
E32 1 INTEGRIQUIN/BI
E33 1 INTEGRIQUINOL/BI
E34 1 INTEGRIQUINOLONE/BI

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E36     12   INTEGRISTERONE/BI

=> e integrin/cn
E37      1   INTEGRIFOSIDE D/CN
E38      1   INTEGRILIN/CN
E39      2 --> INTEGRIN/CN
E40      1   INTEGRIN (765-ISOLEUCINE) (CHICKEN CLONE 1D SUBUNIT PRECURSO
             R REDUCED)/CN
E41      1   INTEGRIN (788-GLUTAMIC ACID) (CHICKEN CLONE 1D SUBUNIT PRECU
             RSOR REDUCED)/CN
E42      1   INTEGRIN (788-PHENYLALANINE) (CHICKEN CLONE 1D SUBUNIT PRECU
             RSOR REDUCED)/CN
E43      1   INTEGRIN (790-ASPARTIC ACID) (CHICKEN CLONE 1D SUBUNIT PRECU
             RSOR REDUCED)/CN
E44      1   INTEGRIN (790-METHIONINE) (CHICKEN CLONE 1D SUBUNIT PRECURSO
             R REDUCED)/CN
E45      1   INTEGRIN (CHICKEN CLONE 1D SUBUNIT PRECURSOR PROTEIN MOIETY
             REDUCED)/CN
E46      1   INTEGRIN (CHICKEN CLONE 1D SUBUNIT PROTEIN MOIETY REDUCED)/C
             N
E47      1   INTEGRIN (DROSOPHILA MELANOGASTER GENE VOLADO ISOFORM VOL-S)
             /CN
E48      1   INTEGRIN (DROSOPHILA MELANOGASTER GENE VOLADO ISOFORM VOL-S)
              FUSION PROTEIN WITH 64-1115-INTEGRIN (DROSOPHILA MELANOGAST
             ER GENE VOLADO ISOFORM VOL-L)/CN

=> s e39
L3       2 INTEGRIN/CN

=> s e15
L4   12890 CYTOKINE/BI

=> file caplus, biosis, medline, embase

FILE 'CAPLUS' ENTERED AT 02:24:19 ON 04 JUL 2009
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FILE 'EMBASE' ENTERED AT 02:24:19 ON 04 JUL 2009
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=> s L3
L5   15008 L3

=> S L4
  3 FILES SEARCHED...
L6   57377 L4

=> (cell growth factor)
  2 FILES SEARCHED...
L7   20659 (CELL GROWTH FACTOR)
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=> silk fibroin
L8 4734 SILK FIBROIN

=> l5 and L6
L9 47 L5 AND L6

=> L7 and L9
L10 0 L7 AND L9

=> L7 and L8
L11 1 L7 AND L8

=> d bib, ti, abs L11

L11 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2009 ACS on STN
AN 2009:245335 CAPLUS
DN 150:456348
TI Growth factor gradients via microsphere delivery in biopolymer scaffolds for osteochondral tissue engineering
AU Wang, Xiaoqin; Wenk, Esther; Zhang, Xiaohui; Meinel, Lorenz; Vunjak-Novakovic, Gordana; Kaplan, David L.
CS Department of Biomedical Engineering, Tufts University, Medford, MA, 02155, USA
SO Journal of Controlled Release (2009), 134(2), 81-90
CODEN: JCREEC; ISSN: 0168-3659
PB Elsevier B.V.
DT Journal
LA English
TI Growth factor gradients via microsphere delivery in biopolymer scaffolds for osteochondral tissue engineering
AB Temporally and spatially controlled delivery of growth factors in polymeric scaffolds is crucial for engineering composite tissue structures, such as osteochondral constructs. In the present study, microsphere-mediated growth factor delivery in polymer scaffolds and its impact on osteochondral differentiation of human bone marrow-derived mesenchymal stem cells (hMSCs) was evaluated. Two growth factors, bone morphogenetic protein 2 (rhBMP-2) and insulin-like growth factor I (rhIGF-I), were incorporated as a single concn. gradient or reverse gradient combining 2 factors in the scaffolds. To assess the gradient making system and the delivery efficiency of polylactic-co-glycolic acid (PLGA) and silk fibroin microspheres, initially an alginate gel was fabricated into a cylinder shape with microspheres incorporated as gradients. Compared to PLGA microspheres, silk microspheres were more efficient in delivering rhBMP-2, probably due to sustained release of the growth factor, while less efficient in delivering rhIGF-I, likely due to loading efficiency. The growth factor gradients formed were shallow, inducing non-gradient trends in hMSC osteochondral differentiation. Aq.-derived silk porous scaffolds were used to incorporate silk microspheres using the same gradient process. Both growth factors formed deep and linear concn. gradients in the scaffold, as shown by ELISA. After seeding with hMSCs and culturing for 5 wk in a medium contg. osteogenic and chondrogenic components, hMSCs exhibited osteogenic and chondrogenic differentiation along the concn. gradients of rhBMP-2 in the single gradient of rhBMP-2 and reverse gradient of rhBMP-2/rhIGF-I, but not the rhIGF-I gradient system, confirming that silk microspheres were more efficient in delivering rhBMP-2 than rhIGF-I for hMSCs osteochondrogenesis. This novel silk microsphere/scaffold system

offers a new option for the delivery of multiple growth factors with
spatial control in a 3D culture environment for both understanding natural
tissue growth process and in vitro engineering complex tissue constructs.
RE.CNT 54 THERE ARE 54 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> L11 and L5
L12 0 L11 AND L5

=> d his

(FILE 'HOME' ENTERED AT 02:20:34 ON 04 JUL 2009)

FILE 'REGISTRY' ENTERED AT 02:21:04 ON 04 JUL 2009
L1 0 CYTOKINE/CN
E CYTOKINE/CN
E CYTOKINE/
L2 555 S E 15
E INTEGRIN/
E INTEGRIN/CN
L3 2 S E39
L4 12890 S E15

FILE 'CAPLUS, BIOSIS, MEDLINE, EMBASE' ENTERED AT 02:24:19 ON 04 JUL 2009
L5 15008 S L3
L6 57377 S L4
L7 20659 (CELL GROWTH FACTOR)
L8 4734 SILK FIBROIN
L9 47 L5 AND L6
L10 0 L7 AND L9
L11 1 L7 AND L8
L12 0 L11 AND L5

=> (L5 and L6) and L8
L13 0 (L5 AND L6) AND L8

=> L7 and L8
L14 1 L7 AND L8

=> l8 and L5
L15 0 L8 AND L5

=> L6 and L8
L16 1 L6 AND L8

=> d bib, ti, abs l16

L16 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2009 ACS on STN
AN 2008:1199756 CAPLUS
DN 150:530443
TI Inhibitory effect of conditioned medium of silk fibroin
-treated osteoblasts in osteoclast differentiation
AU Yeo, Joo-Hong; Park, Kyung-Ho; Ju, Won-Chul; Lee, Jinah; Lee, Kwang-Gill;
Woo, Soon-Ok; Han, Sang-Mi; Kweon, HaeYong; Kim, Sung-Su; Cho, Yunhi
CS Dept. of Agricultural Biology, National Institute of Agricultural Science
and Technology, Suwon, 441-100, S. Korea
SO Han'guk Sikp'um Yongyang Kwahak Hoechi (2008), 37(8), 992-997

CODEN: HSYHFB; ISSN: 1226-3311
PB Korean Society of Food Science and Nutrition
DT Journal
LA Korean
TI Inhibitory effect of conditioned medium of silk fibroin -treated osteoblasts in osteoclast differentiation
AB In this study, we investigated the indirect effect of silk-fibroin on osteoclastic differentiation of RAW264.7 cells. The conditioned medium were collected from MC3T3-E1 osteoblasts treated with 0.001 mg/mL.apprx.0.1 mg/mL silk fibroin for 6 days, mixed in 1:1 ratio with osteoclast medium, and then added into RAW264.7 cells with receptor activator of nuclear factor kappa B ligand (RANKL), a differentiation inducer for 3 days. Of osteoclastic cytokines in the conditioned medium, the protein expression of osteoprotegerin (OPG) with silk-fibroin was not significantly different. However, the protein expression of interleukin (IL)-1.beta. was specifically lower in a dose dependent manner. In RAW264.7 cells, the conditioned medium with silk-fibroin inhibited RANKL induced osteoclastic differentiation as total no. of multinucleated tartrate-resistant alk. phosphatase (TRAP)-pos. osteoclasts in a dose dependent manner. Taken together, we demonstrated that the conditioned medium of silk-fibroin treated osteoblasts inhibits RANKL induced differentiation of osteoclasts with inhibiting selective expression of IL-1.beta